



Colorado Immunization Information System (CIIS)

CIIS Interface Connectivity Information

This document is an explanation of the options for transferring provider data to the Colorado Immunization Information System (CIIS). Bi-directional real-time messaging can be achieved using the CIIS Real-time Messaging Gateway. CIIS also has a secure FTP server to handle only inbound messages. The server application utilized is Globalscape EFT Server version 6.4. The preferred client software for secure FTP transfer is CuteFTP Pro. All options are explained below.

Bi-directional real-time messaging

Transfer protocols available

- HTTPS
 - SOAP Messages sent to the CDPHE WSDL
 - The CDPHE WSDL is based on the CDC Immunizations WSDL, having credentials username, facilityid, and password.
 - WSDL urls
 - Test: <https://cigttest.state.co.us/CIgwsl/CIService.wsdl>
 - Production:: <https://cig.state.co.us/CIgwsl/CIService.wsdl>
 - Gateway service urls
 - Test: <https://cigttest.state.co.us/CIService/ImmunizationService>
 - Production:: <https://cig.state.co.us/CIService/ImmunizationService>

Protocol pros and cons

- Pros:
 - Real-time bi-directional messaging support
 - Username & password based credentialing
 - Capability to fully automate transfer of data
- Cons:
 - More complex setup than FTP based processes

Setup tasks

- Setup server account (CIIS staff)
 - Credentials username, facilityid, and password are assigned and communicated by CIIS staff

- Test connection using ConnectivityTest WSDL method

File-based inbound batch messaging

NOTE: Test and production files go to the same endpoint for batch messaging

Transfer protocols available

- FTPS (FTP with TLS/SSL (AUTH TLS – Explicit)
 - Using FTP client application over (*non-standard*) port 1971 (Data socket ports 52000-52040)
- SFTP using SSH2 (Secure Shell)
 - Using FTP client application over (*standard*) port 22
- HTTPS
 - Using web browser, <https://cohealthnet.com:447> (*also a non-standard port*)

NOTE: FTPS and SFTP require client application to be installed on the local computer. Upload via HTTPS is done using a web browser, entering login credentials each time.

Protocol pros and cons

- FTPS (FTP with TLS/SSL (AUTH TLS – Explicit)
 - Pros:
 - Allows for automated file uploads
 - Cons:
 - Local FTP client application must be installed
 - Utilizes a *non-standard* port 1971, which must be opened on the client firewall
 - Does not support real-time or bi-directional messaging
- SFTP using SSH2 (Secure Shell)
 - Pros:
 - Allows for automated file uploads
 - Utilizes a standard port, 22, which is usually open on the client firewall
 - Cons:
 - Local FTP client application must be installed
 - Does not support real-time or bi-directional messaging
- HTTPS
 - Pros:
 - User friendly web interface
 - No need for local FTP client application to be installed
 - Cons:

- Requires login each time files are uploaded
- Manual file upload—no automation
- Utilizes a *non-standard* port 447, which must be opened on the client firewall
- Does not support real-time or bi-directional messaging

Setup tasks

- Setup server account (CIIS staff)
 - Credentials username and password are assigned and communicated by CIIS staff
- User download CuteFTP Pro from www.Globalscape.com
- Setup client side connection in CuteFTP Pro (not necessary for HTTPS transfer)
- Test connection

CIIS FTP/HTTPS Server Account

- An FTP server account must be setup by contacting CIIS user support at (888) 611-9918

Procedure to download CuteFTP Pro Client

- Go to www.Globalscape.com
- **NOTE:** CIIS currently only supplies licenses for version 8
 - On main page click “Support” on the menu bar
 - Under “Additional Support” (in lower right), click on “Replacement Software”
 - Scroll down to the section “Older Versions of CuteFTP Pro”
 - Click Download next to CuteFTP Pro 8
- Run the installation
- Open CuteFTP Pro
- The trial version software can be used for 30 days for temporary testing installations. CIIS can provide a license key free of charge when final installation is performed on a single production server.

Procedure to setup client side connection (CuteFTP Pro Client)

FTPS/SSL Setup

1. Launch the CuteFTP Pro client application
2. From File menu, choose New, then **FTPS (SSL) Site**
3. Enter Label as **“CIIS” or “CIIS SSL”**
4. Enter Host Address to **sslftp.cohealthnet.com**
5. Enter Username to the same username/directory that was setup in the Setup Server Account step
6. Enter password as the same password that was setup in the Setup Server Account step
7. Click the Type tab

8. Make sure the Protocol is set to **“FTP with TLS/SSL (AUTH TLS – Explicit)”** or **“FTP with SSL (AUTH SSL – Explicit)”**
9. Set Port to **1971** (**Note:** Data socket ports are 52000-52040, configured on the clients server firewall)
10. Click OK

SFTP/SSH Setup

1. Launch the CuteFTP Pro client application
2. From File menu, choose New, then **FTPS (SSH2) Site**
3. Enter Label as **“CIIS”** or **“CIIS SSH”**
4. Enter Host Address to **sshftp.cohealthnet.com**
5. Enter Username to the same username/directory that was setup in the Setup Server Account step
6. Enter password as the same password that was setup in the Setup Server Account step
7. Click the Type tab
8. Make sure the Protocol is set to **“SFTP Using SSH2 (Secure Shell)”**
9. Set Port to **22**
10. Click OK

HTTPS Setup

1. No setup required, simply browse to the URL <https://cohealthnet.com:447>
2. Enter username and password login credentials as provided by CIIS

Connect and test on client

FTPS/SSL or SFTP/SSH Testing using the CuteFTP Pro client

- Launch the CuteFTP Pro client application
- Click on Site Manager tab to see available connections
- Depending on what name was chosen in step 3 above in setup client side connection , *right* click “CIIS” or “CIIS SSL” or “CIIS SSH” and choose Properties (this opens the Site Properties window)
- Verify again that the Label, Host Address, Username are correct on the General tab; on the Type tab verify the Protocol type and Port are correct
- Choose Connect on the bottom left of the dialog box
- User will get a message asking to accept the server certificate. Click Ok or Yes to accept the certificate.
- The “Local Drives” tab will have the user’s files
- The “CIIS” tab/window on the right will have the CIIS server directory, the destination for the files to be uploaded. This will likely be blank.
- Choose a file or files from “Local Drives”, *right* click on one of the files and choose “Upload”

- Alternatively the files can be selected, dragged and dropped over to “CIIS” window on the right to transfer the files
- CIIS staff can utilize the Globalscape FTP server application to verify the user is connected and files are successfully uploaded

HTTPS Testing

- User will use a web browser to go to <https://cohealthnet.com:447>
 - User will get a message asking to accept the server certificate. Click Ok or Yes to accept the certificate.
 - At the login screen, enter in the username and password that was assigned by CIIS
 - Check the “Use Java” checkbox
 - Click Okay
 - At this point user may need to install the Java plug-in for their browser
 - Click Upload in the menu bar on the Enhanced File Transfer screen
 - Click Browse to select a file to transfer
 - Click Upload (next to the Browse button) to upload the file to CIIS
- CIIS staff can utilize the Globalscape FTP server application to verify the user has successfully uploaded test files

Port setup reference

FTPS/SSL

Port: 1971

Data sockets : 52000-52040

SFTP/SSH Port: 22

HTTPS Port: 447

Client side user settings summary/examples:

Protocol: SSL (FTP with TLS/SSL (AUTH TLS – Explicit)

Login Username: (CIIS assigned per account)

FTP address: sslftp.cohealthnet.com

Port: 1971

Protocol: SFTP using SSH2

Login Username: (CIIS assigned per account)

FTP address: sshftp.cohealthnet.com

Port: 22

Protocol: HTTPS

Browser URL: <https://cohealthnet.com:447>

Automation for SFTP and FTPS transfer

- CIIS has developed a vbscript which may be utilized for automation of uploads. This requires some simple edits to the script and scheduling via Windows Scheduler.
- CuteFTP Pro also has some automation functionality that may be utilized for automation of uploads